

Friday, August 20, 2010 3:45:49 PM



Accept

**Setup Start**

Stop



1. The first step is to identify the problem or question that needs to be addressed. This involves understanding the context and the specific requirements of the task.

2. The second step is to gather relevant information and resources. This may involve researching existing solutions, consulting with experts, or collecting data.

3. The third step is to develop a plan or strategy. This involves breaking down the problem into smaller, manageable tasks and determining the sequence of steps to be taken.

4. The fourth step is to implement the plan. This involves carrying out the tasks and activities outlined in the plan, while monitoring progress and making adjustments as needed.

5. The fifth step is to evaluate the results. This involves comparing the outcomes of the implementation against the original goals and objectives, and identifying any areas for improvement.

6. The sixth step is to document the process and findings. This involves recording the steps taken, the resources used, and the results achieved, in order to provide a clear record of the work done.

7. The seventh step is to communicate the results. This involves sharing the findings and conclusions with the relevant stakeholders, and providing recommendations for future action.

8. The eighth step is to reflect on the process. This involves thinking about what worked well, what challenges were encountered, and how the process could be improved for future projects.

9. The ninth step is to conclude the project. This involves finalizing all tasks and activities, and ensuring that all objectives have been met.

10. The tenth step is to celebrate the success. This involves acknowledging the achievements of the team and providing a sense of closure to the project.

Cust Item ID:

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100	101	102	103	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120	121	122	123	124	125	126	127	128	129	130	131	132	133	134	135	136	137	138	139	140	141	142	143	144	145	146	147	148	149	150	151	152	153	154	155	156	157	158	159	160	161	162	163	164	165	166	167	168	169	170	171	172	173	174	175	176	177	178	179	180	181	182	183	184	185	186	187	188	189	190	191	192	193	194	195	196	197	198	199	200	201	202	203	204	205	206	207	208	209	210	211	212	213	214	215	216	217	218	219	220	221	222	223	224	225	226	227	228	229	230	231	232	233	234	235	236	237	238	239	240	241	242	243	244	245	246	247	248	249	250	251	252	253	254	255	256	257	258	259	260	261	262	263	264	265	266	267	268	269	270	271	272	273	274	275	276	277	278	279	280	281	282	283	284	285	286	287	288	289	290	291	292	293	294	295	296	297	298	299	300	301	302	303	304	305	306	307	308	309	310	311	312	313	314	315	316	317	318	319	320	321	322	323	324	325	326	327	328	329	330	331	332	333	334	335	336	337	338	339	340	341	342	343	344	345	346	347	348	349	350	351	352	353	354	355	356	357	358	359	360	361	362	363	364	365	366	367	368	369	370	371	372	373	374	375	376	377	378	379	380	381	382	383	384	385	386	387	388	389	390	391	392	393	394	395	396	397	398	399	400	401	402	403	404	405	406	407	408	409	410	411	412	413	414	415	416	417	418	419	420	421	422	423	424	425	426	427	428	429	430	431	432	433	434	435	436	437	438	439	440	441	442	443	444	445	446	447	448	449	450	451	452	453	454	455	456	457	458	459	460	461	462	463	464	465	466
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Customer:

Reference:

Approvals:

Process Plan: *W*

Date: 10-8-20

Tooling:

Date:

Run Start



QC:

Date:

SPC (Y/N):

Date:

Stop

[illegible]

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Work Order ID 61370

Friday, August 20, 2010 3:45:49 PM



Page 2

Item ID: D3691-1

Accept



Setup Start



Revision ID:

Stop



Item Name: STUD

Start Date: 8/23/2010 Start Qty: 16.00



Cust Item ID:

Required Date: 8/30/2010 Req'd Qty: 16.00



Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start



QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop



Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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170

QC8- Inspect parts - second check

0.00

DIP 10/09/24

16 0



QC

Memo

0.00

Quality Control

171

0.00



Purchasing

Memo

0.00

CZ 10/9/28 (16)

Purchasing

Liquid Penetrant Inspection as per QSI 038
Issue P/O: *12653*
LPI as per dwg D3691
Attach copy of NDT results to work order

173

Receive & Inspect for Damage & Mat'l Certs

0.00



Packaging

Memo

0.00

10/08/29 (14)

Packaging

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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Work Order ID 61370

Friday, August 20, 2010 3:45:49 PM



Page 3

Item ID: D3691-1

Accept



Setup Start



Revision ID:

Stop



Item Name: STUD

Start Date: 8/23/2010 Start Qty: 16.00



Cust Item ID:

Required Date: 8/30/2010 Req'd Qty: 16.00



Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start



QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop



Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
175 QC Quality Control	QC5- Inspect part completeness to step on W/O Memo	0.00 0.00				<i>MF</i>	<i>10</i>	<i>09</i>	<i>24</i> <i>(16)</i>
180 Packaging Packaging	Identify as per dwg & Stock Location: <i>77</i> Memo	0.00 0.00							<i>10/9/29</i> <i>5</i> <i>140</i>
190 QC Quality Control	QC21- Final Inspection - Work Order Release Memo	0.00 0.00							<i>10/09/30</i> <i>MF</i> <i>10-9-29</i>

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

Friday, August 20, 2010 3:45:48 PM

Page 1

Work Order ID: 61370



Parent Item: D3691-1



Parent Item Name: STUD

Start Date: 8/23/2010

Required Date: 8/30/2010

Start Qty: 16.00

Required Qty: 16.00

Comments: IPP Rev:A New Issue 08-01-29 JLM Veriified By:EC
IPP Rev:B Material Change 09-01-07 JLM Verified By:EC IPP
REV:C AS PER REV D 10-03-16 JLM VERIFIED BY:EC
IPP Rev:C Added note on Step 2 09-01-26 JLM Verified By:EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
M174PH-H900R1.000		Purchased	No				f	26.8000	0.73	11.68584			

17-4SS H900 ROUND BAR 1.00

10.9.9

Location

MAT030

Loc Qty

26.8

26.8

Loc Code



- 10.18

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

DART AEROSPACE LTD		Work Order:	61370
Description: Stud		Part Number:	D3691-1
Inspection Dwg: D3691 Rev: D		Page 1 of 1	

FIRST ARTICLE INSPECTION CHECKLIST

☒ **First Article**
☐ **Prototype**

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
Ø0.695	+/-0.010	.695	/			
45°	0.5°	45°	/			
0.625	+0.004/-0.000	.626	/			
1.25	+0.000/-0.03	1.240	/			
118°	0.5°	118°	/			
R0.03	+/-0.030	R.03	/			
0.11 Ref	+/-0.030	.11	/			
90°	0.5°	90°	/			
Ø0.189	+0.005/-0.001	Ø.190	/			
1.31	+/-0.030	1.31	/			
1.65	+/-0.030	1.65	/			
0.750	+0.000/-0.010	.750	/			
Ø0.659	+0.000/-0.015	Ø.651	/			
7.625	+/-0.015	7.635	/			
2.90	+/-0.030	2.90	/			
3/4-16UNF-2A	N/A	3/4-16UNF	/			
0.075 x 45°	+/-0.010 x 0.5°	.075 x 45°	/			
0.375	+0.000/-0.010	.375	/			
Ø0.189	+0.005/-0.001	Ø.190	/			
R0.25	+/-0.030	R.25	/			
R0.50	+/-0.030	R.50	/			

Measured by:	SA	Audited by:	STP	Prototype Approval:	N/A
Date:	01/08/24	Date:	10/09/24	Date:	N/A

Rev	Date	Change	Revised by	Approved
A	09.05.11	New Issue	KJ	
B	09.11.04	Dwg Rev updated	KJ	
C	10.03.31	Dimensions revised per Dwg Rev D	KJ	

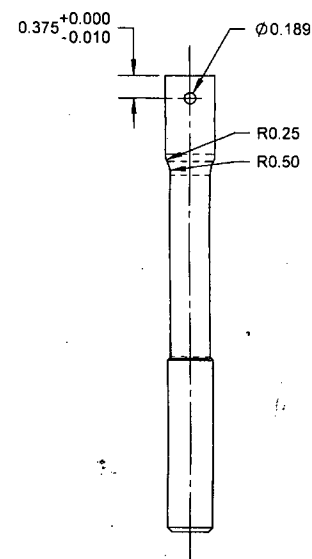
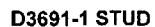
W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____



NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries



RELEASE
2010-03-15

- 1) MATERIAL: 17-4PH STAINLESS STEEL ROUND BAR PER AMS 5643 H-900 CONDITION
2) FINISH: NONE
3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
4) UNITS: INCHES UNLESS OTHERWISE NOTED
5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
6) IDENTIFICATION: NONE
7) WEIGHT: 0.81 lb
8) LPI PER QSI 038 4.1.1 (ASTM E1417 LEVEL 2)

D	7.625 WAS 7.750 (ZN C4-1)		RF	10.03.03
C	0.20 WAS 0.16 & CENTER DRILL #4 WAS CENTER DRILL #2 (ZNB6-1); UPDATE NOTE 8 TO REF QSI (ZN A8-1)		RF	09.09.09
B	CHANGE TO 17-4PH H-900(ZN A8-1); Ø0.695 WAS Ø0.665 (ZN D8-1); REFORMATTED TO CURRENT DWG STANDARDS		RF	08.11.24
A	NEW ISSUE		RF	08.03.12
REV.	DESCRIPTION		BY	DATE
DESIGN	RF	DART AEROSPACE LTD		
DRAWN	RF	HAWKESBURY, ONTARIO, CANADA		
CHECKED		DRAWING NO.	REV.	
MFG. APPR.		D3691	SHEET 1 OF 1	
APPROVED		TITLE	SCALE	
DE APPR.		STUD	NT	
DATE	10.03.03		COPYRIGHT © 2008 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE UNDERSTANDING THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COMMUNICATED TO ANY OTHER PERSON WITHOUT	

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W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
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NOTE: Date & initial all entries



LIQUID PENETRANT TEST REPORT

P- 15194

CLIENT	DART AERO SPACE	DATE	SEPT-28-2010	PAGE	1	OF	1
ATTENTION	LINDA/CHANTEL	ACUREN JOB NO.	108-10-0895	TIME	AM <input checked="" type="checkbox"/>	PM <input type="checkbox"/>	
ADDRESS	1270 ABERDEEN HAWKESBURY ONT.	PO/VO NO.	12653	WORK LOCATION	HAWKESBURY PLANT		
PROJECT	F.P.I. on CROSS TUBES AND MACHINED PARTS.			ACCEPTANCE STD.	ASTM 1417	REV./DATE	2005
ITEM(S) EXAMINED	(4) CROSS TUBES. (16) - STUDS						

JOB DESCRIPTION	PROCEDURE NO. LT-0002	REV./DATE	-	TECHNIQUE NO. LT-TLH2	REV./DATE	-
PART NO.	MATERIAL STAINLESS STEEL THICKNESS ALUMINE ALUMINUM					
SCOPE	WET FLOURESCENT LIQUID PENETRANT INSPECTION CARRIED OUT ON 100% EXTERNAL SURFACE					

TEST DETAILS					
METHOD	<input checked="" type="checkbox"/> FLUORESCENT	<input type="checkbox"/> VISIBLE	<input checked="" type="checkbox"/> WATER WASH	<input type="checkbox"/> SOLVENT REMOVABLE	<input type="checkbox"/> POST EMULSIFIED
FAMILY BRAND	MAGNA FLUX		BLACK LIGHT S/N	16459	<input type="checkbox"/> OUTPUT > 1000 μ W/cm ²
PENETRANT	ZL 67	MINIMUM DWELL TIME	45 MIN.	LIGHTING EQUIP.	<input type="checkbox"/> FLASHLIGHT <input type="checkbox"/> TROUBLELIGHT
PENETRANT REMOVER	H2O	MINIMUM DRY TIME	>10 MIN.	OTHER	LABINO
DEVELOPER	SKD 52	MINIMUM DWELL TIME	10 MIN.	LIGHT METER S/N	1098866
DEVELOPER TYPE	<input checked="" type="checkbox"/> NON AQUEOUS	<input type="checkbox"/> AQUEOUS	<input type="checkbox"/> DRY	CAL DUE DATE	OCT 19 2010

TEST SURFACE					
SURFACE CONDITION	<input type="checkbox"/> AS GROUND	<input type="checkbox"/> AS WELDED	<input checked="" type="checkbox"/> MACHINED	<input type="checkbox"/> SHOT BLASTED	<input checked="" type="checkbox"/> CLEAN BARE METAL
SURFACE TEMPERATURE	<input type="checkbox"/> < -4°C/ 20°F	<input type="checkbox"/> -4°C/ 20°F TO 10°C/50°F	<input checked="" type="checkbox"/> 10°C/50°F TO 52°C/125°F	<input type="checkbox"/> > 52°C/125°F	

RESULTS- (<input type="checkbox"/> METRIC <input checked="" type="checkbox"/> IMPERIAL)	
16 - STUDS - W.O. 61370 ✓	SEE PREVIOUS F.P.I. REPORT # 15193 IN RECORDS TO - CROSS TUBES - W.O. 61852 - W.O. 61853...
1 - CROSS TUBE - W.O. 62045 ✓	
1 - CROSS TUBE - W.O. 61370 ✓	
1 - CROSS TUBE - W.O. 61852 ✓	
1 - CROSS TUBE - W.O. 61853 ✓	
M/10-08-29	

Scope of Services
The agreement of Acuren Group Inc. to perform services extends only to those services provided for in writing. Under no circumstances shall such services extend beyond the performance of the requested services. It is expressly understood that all descriptions, comments and expressions of opinion reflect the opinions or observations of Acuren Group Inc. based on information and assumptions supplied by the owner/operator and are not intended nor can they be construed as representations or warranties. Acuren Group Inc. is not assuming any responsibilities of the owner/operator and the owner/operator retains complete responsibility for the engineering, manufacture, repair and use decisions as a result of the data or other information provided by Acuren Group Inc. In no event shall Acuren Group Inc.'s liability in respect of the services referred to herein exceed the amount paid for such services.

Standard of Care
In performing the services provided, Acuren Group Inc. uses the degree, care and skill ordinarily exercised under similar circumstances by others performing such services in the same or similar locality. No other warranty, expressed or implied, is made or intended by Acuren Group Inc.

SIGNATURES		DTR #	E-63393
CLIENT REPRESENTATIVE	MATTHEW MURPHY	REPORT REVIEWED BY:	
TECHNICIAN (SIGNATURE):	Mike Johnston	NAME	INITIALS
NAME (PRINT):	1 ST TECHNICIAN	CGSB LEVEL	SNT LEVEL
CGSB LEVEL	2 ND TECHNICIAN	CGSB LEVEL	SNT LEVEL
CGSB REG. No	CGSB REG. No		